BRAIN RESEARCH

VOL. 614 NOS. 1/2 | CONTENTS | 18 JUNE 1993

Cited in Biological Abstracts (BIOSIS) - Chem. Abstracts - Index Medicus (MEDLINE) - Current Contents (Life Sci.) - Excerpta Medica (EMBASE) - Psychological Abstracts (PsycINFO) - Pascal et Francis (INIST-CNRS) - RIS (Reference Update) - Current Awareness in Biological Science (CABS)

Announcement from the Publisher v

Guidelines for the submission of manuscripts vii

Research Reports

Angiotensin II in the spinal cord of the rat and its sympatho-excitatory effects
D.I. Lewis and J.H. Coote (UK) 1

Kainate toxicity in energy-compromised rat hippocampal slices: differences between oxygen and glucose deprivation
A. Schurr and B.M. Rigor (USA) 10

Elevated concentrations of nerve growth factor in heart and mesenteric arteries of spontaneously hypertensive rats
C. Zettler and R.A. Rush (Australia) 15

Recovery of hippocampal dentate granule cell responsiveness to entorhinal cortical input following norepinephrine depletion
G.B. Robinson, S.J. Fluharty, M.J. Zigmond, R.J. Sclabassi and T.W. Berger (Canada, USA) 21

Traumatic brain injury produces impairments in long-term and recent memory
L.K. Gorman, B.L. Shook and D.P. Becker (USA) 29

5-HT uptake sites and 5-HT_2 receptors in brain of antidepressant-free suicide victims/depressives: increase in 5-HT_2 sites in cortex and amygdala
P.D. Hrdina, E. Demeter, T.B. Vu, P. Sótónyi and M. Palkovits (Canada, Hungary) 37

Self-sustained spreading depressions in the chicken retina and short-term neuronal–glial interactions within the gray matter neuropil
V.M. Fernandes de Lima, D. Scheller, F. Tegtmeier, W. Hanke and W.R. Schlue (FRG) 45

Strain-dependent differences in responsiveness of mice to nitrous oxide (N_2O) antinociception
R.M. Quock, J.L. Mueller and L.K. Vaughn (USA) 52

Radioimmunoligand characterization and immunohistochemical localization of dopamine D_2 receptors on rods in the rat retina
T. Vuvan, M. Geffard, P. Denis, A. Simon and J. Nguyen-Legros (France) 57

Mating activates androgen receptor-containing neurons in chemosensory pathways of the male Syrian hamster brain
R.I. Wood and S.W. Newman (USA) 65

The distribution of nitric oxide synthase-containing autonomic preganglionic terminals in the rat
C.R. Anderson, S.L. Edwards, J.B. Furness, D.S. Bredt and S.H. Snyder (Australia, USA) 78

Alterations in δ opioid receptor levels in discrete areas of the neocortex and in the globus pallidus of the aging guinea pig: a quantitative autoradiographic study
J.M. Hiller, L.-Q. Fan and E.J. Simon (USA) 86

Hormonal and metabolic effects of neuroglucopenia
P.E. Molina, K. Eltayeb, H. Hourani, K. Okamura, L.B. Nanney, P. Williams and N.N. Abumrad (USA) 99

Adult naris closure profoundly reduces tyrosine hydroxylase expression in mouse olfactory bulb
H. Baker, K. Morel, D.M. Stone and J.A. Maruniak (USA) 109

Stress-induced changes of extracellular 5-hydroxyindoleacetic acid concentrations followed in the nucleus raphe dorsalis and the frontal cortex of the rat
H.-W. Clement, F. Schäfer, C. Ruwe, D. Gemsa and W. Wesemann (FRG) 117

Stimulatory effects of bombesin-like peptides on suprachiasmatic neurons in brain slices
K.-C. Tang and J.-T. Pan (Republic of China) 125

$p34^{cdc2}$ homologue is located in nucleoli of the nervous and endocrine systems
H. Ino, T. Mochizuki, N. Yanaihara and T. Chiba (Japan) 131

Protection of the axonal cytoskeleton in anoxic optic nerve by decreased extracellular calcium
S.G. Waxman, J.A. Black, B.R. Ransom and P.K. Stys (USA, Canada) 137

Altered α_1-adrenoceptor binding in intact and adrenalectomized obese Zucker rats (*fa / fa*)
B.E. Levin, B. Planas, V.H. Routh, J. Hamilton, J.S. Stern and B.A. Horwitz (USA) 146

Microinfusions of excitatory amino acid antagonists into the trigeminal sensory complex antagonize the jaw opening reflex in freely moving rats
Y. Boucher, B. Pollin and J. Azérad (France) 155

Regional blood–brain lactate influx
J.C. LaManna, J.F. Harrington, L.M. Vendel, K. Abi-Saleh, W.D. Lust and S.I. Harik (USA) 164

Modulation by isoproterenol and propranolol of somatostatin receptors in synaptosomes from rat frontoparietal cortex
S. López-Sañudo and E. Arilla (Spain) 171

(contents continued on p. 360)

0006-8993(19930618)614:1/2;1-W

BRAIN RESEARCH

VOL. 614 NOS. 1/2 | CONTENTS | 18 JUNE 1993

Cited in Biological Abstracts (BIOSIS) - Chem. Abstracts - Index Medicus (MEDLINE) - Current Contents (Life Sci.) - Excerpta Medica (EMBASE) - Psychological Abstracts (PsycINFO) - Pascal et Francis (INIST-CNRS) - RIS (Reference Update) - Current Awareness in Biological Science (CABS)

Announcement from the Publisher v

Guidelines for the submission of manuscripts vii

Research Reports

Angiotensin II in the spinal cord of the rat and its sympatho-excitatory effects
D.I. Lewis and J.H. Coote (UK) 1

Kainate toxicity in energy-compromised rat hippocampal slices: differences between oxygen and glucose deprivation
A. Schurr and B.M. Rigor (USA) 10

Elevated concentrations of nerve growth factor in heart and mesenteric arteries of spontaneously hypertensive rats
C. Zettler and R.A. Rush (Australia) 15

Recovery of hippocampal dentate granule cell responsiveness to entorhinal cortical input following norepinephrine depletion
G.B. Robinson, S.J. Fluharty, M.J. Zigmond, R.J. Sclabassi and T.W. Berger (Canada, USA) 21

Traumatic brain injury produces impairments in long-term and recent memory
L.K. Gorman, B.L. Shook and D.P. Becker (USA) 29

5-HT uptake sites and 5-HT_2 receptors in brain of antidepressant-free suicide victims/depressives: increase in 5-HT_2 sites in cortex and amygdala
P.D. Hrdina, E. Demeter, T.B. Vu, P. Sótónyi and M. Palkovits (Canada, Hungary) 37

Self-sustained spreading depressions in the chicken retina and short-term neuronal–glial interactions within the gray matter neuropil
V.M. Fernandes de Lima, D. Scheller, F. Tegtmeier, W. Hanke and W.R. Schlue (FRG) 45

Strain-dependent differences in responsiveness of mice to nitrous oxide (N_2O) antinociception
R.M. Quock, J.L. Mueller and L.K. Vaughn (USA) 52

Radioimmunoligand characterization and immunohistochemical localization of dopamine D_2 receptors on rods in the rat retina
T. Vuvan, M. Geffard, P. Denis, A. Simon and J. Nguyen-Legros (France) 57

Mating activates androgen receptor-containing neurons in chemosensory pathways of the male Syrian hamster brain
R.I. Wood and S.W. Newman (USA) 65

The distribution of nitric oxide synthase-containing autonomic preganglionic terminals in the rat
C.R. Anderson, S.L. Edwards, J.B. Furness, D.S. Bredt and S.H. Snyder (Australia, USA) 78

Alterations in δ opioid receptor levels in discrete areas of the neocortex and in the globus pallidus of the aging guinea pig: a quantitative autoradiographic study
J.M. Hiller, L.-Q. Fan and E.J. Simon (USA) 86

Hormonal and metabolic effects of neuroglucopenia
P.E. Molina, K. Eltayeb, H. Hourani, K. Okamura, L.B. Nanney, P. Williams and N.N. Abumrad (USA) 99

Adult naris closure profoundly reduces tyrosine hydroxylase expression in mouse olfactory bulb
H. Baker, K. Morel, D.M. Stone and J.A. Maruniak (USA) 109

Stress-induced changes of extracellular 5-hydroxyindoleacetic acid concentrations followed in the nucleus raphe dorsalis and the frontal cortex of the rat
H.-W. Clement, F. Schäfer, C. Ruwe, D. Gemsa and W. Wesemann (FRG) 117

Stimulatory effects of bombesin-like peptides on suprachiasmatic neurons in brain slices
K.-C. Tang and J.-T. Pan (Republic of China) 125

$p34^{cdc2}$ homologue is located in nucleoli of the nervous and endocrine systems
H. Ino, T. Mochizuki, N. Yanaihara and T. Chiba (Japan) 131

Protection of the axonal cytoskeleton in anoxic optic nerve by decreased extracellular calcium
S.G. Waxman, J.A. Black, B.R. Ransom and P.K. Stys (USA, Canada) 137

Altered α_1-adrenoceptor binding in intact and adrenalectomized obese Zucker rats (*fa / fa*)
B.E. Levin, B. Planas, V.H. Routh, J. Hamilton, J.S. Stern and B.A. Horwitz (USA) 146

Microinfusions of excitatory amino acid antagonists into the trigeminal sensory complex antagonize the jaw opening reflex in freely moving rats
Y. Boucher, B. Pollin and J. Azérad (France) 155

Regional blood–brain lactate influx
J.C. LaManna, J.F. Harrington, L.M. Vendel, K. Abi-Saleh, W.D. Lust and S.I. Harik (USA) 164

Modulation by isoproterenol and propranolol of somatostatin receptors in synaptosomes from rat frontoparietal cortex
S. López-Sañudo and E. Arilla (Spain) 171

(contents continued on p. 360)

0006-8993(19930618)614:1/2;1-W

(contents continued)

A volume-sensitive Cl^- conductance in a mouse neuroblastoma × rat dorsal root ganglion cell line (F11)
C.E. Pollard (UK) 178
Effect of cocaine, lidocaine kindling and carbamazepine on batrachotoxin-induced phosphoinositide hydrolysis in rat brain slices
R.L. Margolis, D.-M. Chuang, D. Dick, S.R.B. Weiss and R.M. Post (USA) 185
Reserpine impairs spatial working memory performance in monkeys: reversal by the α-adrenergic agonist clonidine
J.X. Cai, Y.-y. Ma, L. Xu and X.-t. Hu (China) 191
The paraventricular nucleus is uniquely responsive to the feeding stimulatory effects of steroid hormones
D.L. Tempel, T. Kim and S.F. Leibowitz (USA) 197
Hyposmotic activation hyperpolarizes outer hair cells of guinea pig cochlea
N. Harada, A. Ernst and H.P. Zenner (Germany, Japan) 205
Time course of fiber outgrowth from fetal anterior hypothalamic heterografts
P.J. Sollars and G.E. Pickard (USA) 212
Identification, partial characterization, and hypothalamic distribution of κ, μ, and δ opioid receptors in a passerine songbird (*Junco hyemalis*)
P. Deviche, P. Cotter and C.C. Gulledge (USA) 220
The dorsal hippocampus modifies the negative feedback effect of glucocorticoids on the adrenocortical and median eminence CRF-41 responses to photic stimulation
S. Feldman and J. Weidenfeld (Israel) 227
Delayed detyrosination of α-tubulin from parallel fibre axons and its correlation with impaired synaptogenesis in hypothyroid rat cerebellum
R. Poddar and P.K. Sarkar (India) 233
Extracellular γ-aminobutyric acid levels in the rat caudate-putamen: Monitoring the neuronal and glial contribution by intracerebral microdialysis
K. Campbell, P. Kalén, C. Lundberg, K. Wictorin, E. Rosengren and A. Björklund (Sweden) 241
Single-cell $[Ca^{2+}]_i$ analysis and biochemical characterization of pinealocytes immobilized with novel attachment peptide preparation
N.C. Schaad, A. Parfitt, J.T. Russell, A.E. Schaffner, H.-W. Korf and D.C. Klein (USA, Germany) 251
Neurotrophic effects of cAMP generating systems on central noradrenergic neurons
L. Sklair-Tavron and M. Segal (Israel) 257
Possible involvement of K(ATP) channels in the control of 5-HT neurons
S. Haj-Dahmane, A.-M. Laporte, V. Vantalon, C.-M. Fattaccini, M. Hamon and L. Lanfumey (France) 270
Induced resistance and susceptibility to cerebral ischemia in gerbil hippocampal neurons by prolonged but mild hypoperfusion
T. Ohtsuki, M. Matsumoto, K. Kitagawa, A. Taguchi, Y. Maeda, R. Hata, S. Ogawa, H. Ueda, N. Handa and T. Kamada (Japan) 279
Responses of neurons in thalamic ventrobasal complex of rats to graded distension of uterus and vagina and to uterine suprafusion with bradykinin and prostaglandin $F_{2\alpha}$
G. Guilbaud, K.J. Berkley, J.-M. Benoist and M. Gautron (France) 285
A subpopulation of large calbindin-like immunopositive neurones is present in the hippocampal formation in food-storing but not in non-storing species of bird
C.M. Montagnese, J.R. Krebs, A.D. Székely and A. Csillag (UK, Hungary) 291
Morphine-evoked release of adenosine from the spinal cord occurs via a nucleoside carrier with differential sensitivity to dipyridamole and nitrobenzylthioinosine
M.I. Sweeney, T.D. White and J. Sawynok (Canada) 301
Cl^-/HCO_3^- exchange function differs in adult and fetal rat hippocampal neurons
K.M. Raley-Susman, R.M. Sapolsky and R.R. Kopito (USA) 308
Effect of ibuprofen on regional eicosanoid production and neuronal injury after forebrain ischemia in rats
P.M. Patel, J.C. Drummond, T. Sano, D.J. Cole, C.J. Kalkman and T.L. Yaksh (USA, The Netherlands) 315
Down-regulation of phosphatidylinositol response to BDNF and NT-3 in cultures of cortical neurons
H.R. Widmer, F. Ohsawa, B. Knüsel and F. Hefti (USA) 325

Short Communications

Ionic contributions to the oscillatory firing activity of rat Purkinje cells in vitro
W. Chang, J.C. Strahlendorf and H.K. Strahlendorf (USA) 335
Potentiation of nitric oxide formation following bilateral carotid occlusion and focal cerebral ischemia in the rat: in vivo detection of the nitric oxide radical by electron paramagnetic resonance spin trapping
T. Tominaga, S. Sato, T. Ohnishi and S.T. Ohnishi (USA) 342
Chronic exposure to environmental levels of lead impairs in vivo induction of long-term potentiation in rat hippocampal dentate
S.M. Lasley, J. Polan-Curtain and D.L. Armstrong (USA) 347
Short periods of hypoxia activate a K^+ current in central neurons
C. Jiang and G.G. Haddad (USA) 352

Author Index 357